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TREE TALKS

BY

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Propagator and Grower for

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The Colorado Nursery Company

Wholesale and Retail Growers of a
General Line of High Grade
Nursery Stock for the
Western Planter

MAIL ORDERS RECEIVE SPECIAL
ATTENTION

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AND PRICE LIST

LOVELAND, COLORADO
1911

Distance for Planting Trees and Plants

Standard Apple, 25 to 30 feet apart each way.

Standard Pear, 20 feet apart each way.

Cherry, 18 to 20 feet apart each way.

Plum and Apricots, 18 to 20 feet each way.

Peach and Nectarines, 16 to 18 feet each way.

Dwarf Pear, 10 to 12 feet each way.

Grapes, rows 8 feet apart, 8 feet in rows.

Gooseberries and Currants, rows 5 feet apart, 3½ feet in row.

Raspberries and Blackberries, rows 7 feet apart 30 inches in row.

Strawberries, rows 3 feet apart, 12 inches in rows.

Dewberries, rows 5 feet apart, 5 feet in rows.

Asparagus, rows 3½ feet apart, 12 inches in row.

Number of Trees per Acre

30 feet apart each way.....	50
25 feet apart each way.....	70
20 feet apart each way.....	110
18 feet apart each way.....	135
15 feet apart each way.....	205
12 feet apart each way.....	300
10 feet apart each way.....	435
8 feet apart each way.....	680
6 feet apart each way.....	1210
5 feet apart each way.....	1745
4 feet apart each way.....	2725
3 feet apart each way.....	4840

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows and the product will be the number of square feet for each plant or hill; when divided into the number of square feet in an acre (43560) will give the number of trees or plants to the acre.

INTRODUCTION

There is always a demand from our customers for advice and instructions upon planting trees and other plants and caring for them during the first year, and this little book is offered as an answer to those requests. It is the boiled down result of a lot of hard work and some costly experience which, however, have been worth while, for now we know how to go about the little tricks that are so essential to success and, if these suggestions are carefully read and intelligently followed there is no real reason for failure.

They are intended especially for the home orchard man: the man who plants some trees and vines for his own use and pleasure and is too busy at other things to become an expert orchardist. I have tried to make it short enough so that the busiest man will have time to read it all, and yet long enough to cover all essential points.

It is beyond the scope of a book of this size to take up practical orcharding. There have been tons of good books written on that subject already, and where possible, it will pay to consult some of these. If however, such works are not available, we will be glad to serve you with our time and experience and we believe we can help you. Write us about it.

Selecting Stock

This is the first and most important move in getting an orchard and one that ought to be attended to with the utmost care. The one object is to get the kind and quality of stock that you can be sure will give you a return for your money, provided you do your part. And right here, I want to say a few words about Western Grown Trees. These trees are grown by irrigation and are never stunted by lack of rain during their growing

season, consequently, they are always vigorous and healthy. They are not damaged by fungous diseases and insect pests because such pests of the East have not been admitted to Colorado and, the Western grown tree is adapted to the Western country, a point in its favor which, some high authorities say, is greatest of them all.

HIGH PRICES are not always an indication of quality, but an unreasonably low price is sometimes an indication of the absence of quality, for the obvious reason that it costs a fixed amount to grow good stock; it costs something more to get it to the planter in the best of condition and when any man offers stock for sale at less than these fixed costs, there is something wrong with the stock, or with the man.

The average man can not expect to become an expert judge of nursery stock. To become one takes several years of pretty thorough training and it is always the safest plan to buy your stock where you can be sure of a square deal.

IN SELECTING VARIETIES you will save time by first finding out what will do best in your section. Your neighbors have, no doubt, planted trees which have fruited and proven successful and, what have done well for him, will do well for you. However; if you have no such guide to go by, stick to the tried and hardy sorts. There are trees for every country if you only find them. We are always glad to be of all possible assistance to our customers, and have gathered, for that purpose, a large amount of facts and experience, which are at your service at any time.

IN ORDERING send in your orders early. At the beginning of the delivery season the nurseryman must assemble on his packing grounds all the stock sold, in order that it may reach all of the planters on time and it would help out wonderfully if your stock could be gotten ready with the others. It

will also avoid delay in shipping and reduce the chance of errors.

WHEN YOU RECEIVE YOUR TREES open the package, at once, shake out all the packing and inspect them thoroughly. Mix up a thin mud and dip the roots in it until they are all thoroughly covered and heel in in moist ground. Then, if there is anything wrong, write to the shipper about it. In the rush of handling a large amount of stock in so short a time, mistakes may occur, which the nurseryman will be glad to correct if given a chance. By doing so early, it will save time and trouble for both.

Fruit Growing on Dry Land

Conservation of moisture is the one essential factor to successful fruit growing in the semi-arid districts of the West. It will be necessary to save and make use of every bit of water that falls for a tree to grow and produce fruit in these districts but enterprising ranchmen, all over the West have demonstrated that it can be done, profitably, by giving the trees and plants the intelligent care that is given to other crops.

Almost every farmer is familiar with the methods of tillage that conserve moisture. Deep thorough tillage in the spring, and constant shallow tillage during the summer will do more to make trees grow than any other kind of cultivation. A liberal amount of manure added to the land from time to time will help hold moisture, much better than where no manure is used.

The number of varieties of the different fruits, that can be used successfully, are of course, limited to the hardiest sorts but there are enough of these to give all the variety one could wish for. The following sorts have been thoroughly tested and are recommended.

Apple—Duchess, Wealthy, Wagener, and Rome Beauty.

Pear—Bartlett.

Cherry—Early Richmond, Wragg, Large Montmorency.

Plum—Hawkeye, DeSoto, Wolf, Lombard.

Peach—Alexander, Crosby (plant sparingly).

Gooseberries—Oregon Champion.

Currants—Victoria, Red Dutch.

Dewberries—Lucretia.

Strawberries—Warfield, Bederwood.

To succeed with small fruit, it must be kept absolutely clean of weeds and grass and given thorough cultivation.

Planting---Preparing the Land

The important thing about preparing the land is deep and thorough plowing, breaking up all the land to a depth of ten inches.

It is sometimes good practice to plant other crops in a growing orchard but it is always bad practice to plant an orchard in growing crops. The land that is selected for the orchard should be cleared of everything else, until the orchard is planted. Then a crop that is to be thoroughly cultivated will be a benefit.

If the orchard is to be irrigated, the land should be leveled before the trees are planted, so that they can be watered at once. This is the critical time in the life of your orchard and it should be watered with that fact in mind.

Pruning---Preparation of the Tree

I believe that lack of experience and neglect of this operation have been the cause of more failure than any other one thing connected with orchard planting.

The object of pruning is two-fold: First, to re-establish the balance between root and top, and second, to secure a head properly shaped and sufficiently open to admit the sun and air for the successful ripening of the

fruit. As the tree stands in the nursery row, the balance between the root and top is exact, that is, no more top is allowed to grow than the roots will support. But in digging some of the roots are cut off and after the tree is planted in the orchard and before it is established in the new soil, it should not be expected that the roots will support as many limbs as they did in the nursery. Do not be afraid to cut them. Three to five limbs are enough to leave and, if properly balanced, will make the best frame work. Remember that the distance between the limbs does not become any greater as the tree grows, and leave them far enough apart so they will not crowd. Four to six inches is good, and six to eight is better. All the other limbs should be cut away entirely and the four or five that are left should be cut back to about fifteen inches.

Head all fruit trees low, from twenty to thirty inches, so as to avoid damage from sun-scald and hard winds, and also to lessen the labor of pruning and picking the fruit. Cut all the roots back to fresh clean wood and remove all that are bruised or broken.

Planting

Do not plant when the ground is too wet, if it can be avoided. Rather, it should be dry enough to work for any other crop. Dig the holes large enough to hold the roots without cramping and deep enough to let the tree stand about two inches deeper than it was in the nursery. Put in the best top soil first, and when the hole is half full, pour in water enough to settle the dirt firmly about the roots; then fill in until the soil is a little above the level. Do not expose the roots to the sun and wind any longer than is absolutely necessary. A few minutes in the sun in this country will damage a tree more than hours of exposure in the rain belt. If we could bear in mind the fact that ALL

PLANTS ARE LIVING THINGS and handle them according, our losses in trees, time and expense would be reduced about one hundred per cent.

APPLE

The apple is the basis of nearly all the orchard business throughout the Intermountain region. Its cultivation has been perfected during the past few years until Colorado produces the finest apples in the world, and land which was of practically no value before the advent of the apple is, when it holds an apple orchard, bringing unheard of prices.

Does it pay to grow apples? Just consult your daily paper any time when Colorado is harvesting a bumper crop. Another good sign that it pays may be noted in that funny tickling under the belt when you would like to eat a big red Jonathan and they are three dollars a box or three for ten cents. Yes, it pays; but it also pays to grow **good** apples, of **good** varieties, which are adapted to your section, varieties of known merit and trees on which you can depend. This can be done by using a little care in the selection of your trees.

THE SELECTION OF VARIETIES must be governed by the purpose for which the orchard is planted. For the commercial orchard, four varieties have come to be generally considered as standard. Gano, Rome Beauty, Wine Sap, Jonathan, but for the family orchard where a succession is desired that will furnish fruit the year round, a few more, possibly eight or ten sorts, is about the proper thing. Do not make the mistake of planting too many varieties, or of planting one because it is popular somewhere else. It may be too tender for this climate and consequently, worthless. And it will take the place of a good tree four or five years be-

fore you find it out.

THE FOLLOWING LIST is small, as compared with some that are offered but they have been tested, some of them for years, and have proven reliable. Others may be just as good but it has not been proven sufficiently for a man to waste much time and money on them.

For Summer—Duchess, Red Astrachan, Yellow Transparent, Early Harvest.

For Autumn—Wealthy, Longfield, McMahon's White, Wolf River, Fameuse, Jefferis.

For Winter—Gano, Jonathan, Geniton, Mammoth Black Twig, Black Ben, Northern Spy, Winter Banana, Rome Beauty, Ben Davis, Wine Sap, Grimes Golden, Stayman's Wine Sap, Northwest Greening, Sheriff, and Snackelford.

THE SIZE TO PLANT is largely up to the planter. Apples are sold in three ages, one, two and three years old. The two and three year trees are graded into four grades which are governed altogether by the size of the tree, and not, as some people suppose, by quality, condition or health. When they are graded by caliper (which is the proper way) the large grade measures, at the top of the ground, 11-16 of an inch, the medium grade 5-8 of an inch, the small grade 1-2 of an inch, and the "whips" 5-16 inch. These figures are the minimum and the grade takes all trees up to the next higher.

THE TIME WAS when the large grades were planted almost exclusively but of late year, planters generally are using the smaller trees, because, while the large trees make the best showing the first few years, they have found that the smaller trees are very apt to outdistance them in the end. The reason for this is, the smaller trees being smaller, of harder, finer texture, suffer less from handling and so get a better, firmer start in their permanent orchard home.

THE APPLE WILL thrive and be profitable in any soil that will grow good wheat. Naturally, some sites are better than others but a whole lot of the things that we read about being essential to success will be found not half so necessary as the common sense of the man behind the planting and cultivating tools.

The trees should be planted from twenty-five to thirty feet apart, headed low, given plenty of water the first year and pruned as directed under pruning.

ONE YEAR APPLE are trees which have roots two years old and tops one year old. They can be had in either buds or grafts, as desired, and are graded by height. The large grade usually runs from 3 1-2 to 5 ft., the medium grade from 2 to 3 1-2 ft., and the small grade from 18 inches to two feet. The trees are especially recommended for commercial planting and have been a great success in that line. They do not cost much less than the older trees because the cost of growing them is almost as great, but the experienced orchardist prefers to shape his trees to suit himself and he can do that with one year trees better than with older ones.

PEAR

Pear growing in the irrigated West is still in its infancy. The trees having an enemy in fire blight that has made its growing a rather hazardous undertaking. However, there is good money to be made in the commercial pear orchard and it is also a valuable addition to a home orchard, if properly selected, its equal as a fine, luscious fruit being hard to find.

All known varieties of pear are more or less subject to the attacks of fire blight, but there are a few sorts that are a great deal more hardy than others and it has been demonstrated that these can be grown to a ripe

old age if given care. The best remedy being to cut out the diseased twigs as soon as they appear.

The pear will thrive on land where apple and peach will starve to death. In fact, they should be planted on a soil where they will make a moderate, firm growth, as too rapid growth tends to produce blight. It will do well under neglect, but to be at its best, must have the care that goes to make up good orchard culture. The trees should be planted twenty feet apart and pruned as given under pruning.

For varieties I would recommend Kieffer and Seckel. Other sorts have succeeded but these are the best.

CHERRY

The Cherry (especially the sour sorts) is a very hardy tree and will thrive and fruit to perfection in Colorado, in nearly all good soils, but the ideal type of soil is a somewhat dry, sandy, gravelly or clay loam. In any case the soil must be kept well drained for no other fruit is so liable to damage by excessive moisture.

But give a cherry orchard the care it deserves and it will produce more dollars, in proportion to cost, than any other fruit. There is always a ready sale for cherries, and there always will be. The supply now is all taken, at fancy prices, as fresh fruit, and if the time ever comes when there is a surplus, the canning factories will be here to take it.

The cherry is not hard to transplant if good stock is used and care is taken in planting and pruning, but this must be looked after to make a success of it. The pruning is the most important because if a tree is inclined to be slow about starting, a severe cutting of the limbs will reduce the strain on the roots and so, give them a chance to throw out the feeders that must be there before the tree can grow.

Five limbs are all that should be left, all the others being cut away entirely, and if the tree is weak it will be a benefit to cut the five limbs back to the last strong bud. This may seem to be severe, but I have tried it many times and have made trees grow where others have failed. All cherry trees should be headed low so as to shade the trunk. The bark is very sensitive and may be injured by the sun.

For varieties I would recommend: Early Richmond, Dyehouse, Large Montmorency, English Morello, Montmorency Ordinary, German Ostheimer, Wragg.

PLUM

Plum growing on a commercial scale is an undertaking which may or may not be successful, according to whether or not the grower is situated near a good market for this class of fruit. So far as growing the fruit is concerned, he will not have any more, if as many troubles as in growing any other fruit. The tree is comparatively easy to transplant and the hardy sorts will thrive anywhere.

Like all other fruits, the plum shows a preference to soil types and is at its best in a rather rich, sandy or clayey loam. It can not thrive in cold wet land and such land should be well drained before the trees are planted.

Plums are divided into three classes, as follows: the natives, which are our own wild plums bred up to their present perfection; the Japanese, originally imported from the Orient, and in texture and appearance somewhat resembling the peach; and the European, the large plums or prunes which are so largely planted throughout the West.

Of these three classes, the natives seem to be the hardiest, and when in doubt it is the part of wisdom to select these. The Japanese are of excellent quality and are fine

for home use or market but they are too tender for Northern Colorado and like climates.

The European sorts seem to have found an ideal home in Colorado and the quality of fruit produced here is second to none.

The trees should be planted 18 to 20 feet apart, pruned as given under pruning and given plenty of water and thorough cultivation. After planting the trees should be wrapped with some material that will furnish shade for the body as they are very susceptible to sun-scald, which kills more young plum trees than all other causes put together.

For varieties I would recommend: Natives: Weaver, Wolf, DeSoto, Hawkeye, Cheney, Wyant; European: German Prune, Hungarian Prune, Peach, Italian, DeGolier, Lombard, Yellow Egg; Japanese: Abundance, Burbank, Red June.

PEACH

Regions where the peach can be grown successfully are limited. The climate of Northern Colorado is too severe for them to be grown to any extent, but in the southern part of the state and on the Western Slope, where they can be grown to their highest perfection, peach growing is an industry that is holding its place near the top.

The peach requires a well drained, moderately rich soil, a somewhat sandy loam is probably the best. In the dry climate of the West the peach must be handled with more care during transplanting than any other tree. It is of very rapid growth, growing as much in one year as other trees do in two, consequently the wood is very soft and will not stand the exposure that other trees will.

After the tree is planted, it should be given a severe pruning. ALL the limbs should be cut back to the last strong bud

and the top cut back to from thirty to thirty-six inches. They should be thoroughly irrigated and the ground around them kept clean and mellow all the time. No tree will suffer so much from neglect as the peach. They can be planted from sixteen to eighteen feet apart.

Good varieties are: Alexander, Crawford Early, Elberta, Crosby, Triumph and Champion.

GRAPES

Grape growing, although not practiced in a large way in Colorado has proven profitable, even to amateurs. It is an industry that brings quick returns, and it appeals to the man who wants a variety of fruit and also to the man who is waiting for his orchard to come into bearing. The grape must be planted on a soil where the moisture may be well controlled during its ripening season. Too much water will ruin them, often causing the loss of an entire crop.

A well drained, sandy soil is best, one that will dry out quickly after irrigation. This class of soil makes it easier to cover the vines during the winter, a thing that must be looked after if you are to have a crop of fruit.

The land should be prepared as for an orchard and the vines set in squares, eight feet apart. Plant a little deeper than they stood in the nursery and cut the tops back to one or two buds. The vineyard must have good cultivation early in the season to induce all the growth possible then. This will give the vines a chance to ripen early and so go into winter quarters in good shape.

The best varieties are: Concord, Worden, Agawam, Delaware, Niagara, Moore's Early, Moore's Diamond.

SMALL FRUIT

GOOSEBERRIES AND CURRANTS can be grown anywhere in the Mountain region on any good soil. With reasonable care they always bear a crop that finds a ready sale at good prices, and no fruit garden is complete without them.

Two year plants should be selected for planting, they are stronger and come into bearing one year earlier than one year plants, and the cost is not a great deal more. Be careful about selecting your varieties and get those that are hardy enough to stand our Western winters. In some localities, not more than two varieties have proven hardy enough, under test, and some that have made a record in the East have proven flat failures here, and hence, have been a knock, rather than a boost, to small fruit growing in this state.

The plants should be set 3 1-2 x 5 ft., the same depth they were in the nursery and the tops cut back to two inches from the ground. Water and cultivate thoroughly, and your plant will pay you handsomely for your work.

Good varieties are: Gooseberries—Oregon Champion, Downing, Chautauqua; Currants—Fay's Prolific, Red Dutch, White Dutch, Victoria, London Market, Black Naples.

BLACKBERRIES should be planted in rows seven feet apart, thirty inches in the row. The dirt should be well packed around the roots and the tops cut back to the top of the ground. They will need winter protection. The one variety I would recommend is Rathbun.

RASPBERRIES should have the same care as the blackberry. They should be planted seven feet by thirty inches and cut back to the ground. The ground must be in good shape and kept so, if they are to make the

desired growth. I would recommend Marlboro for red and Kansas and Gregg for black sorts.

DEWBERRIES may be grown on any good soil, but they seem to do best on the lighter, sandy types, such soils having often produced crops the gross value of which was from seven to nine hundred dollars per acre.

There are various ways of planting, but probably the best way is to set the plants 5x5 feet, and allow them to grow prostrate. They should be cut back to the ground and watered thoroughly. The Lucretia is the only variety I would recommend.

STRAWBERRIES: The most important thing in planting strawberries is preparing the land. Fall plowing, followed by a second plowing in the spring is a good practice, and in any case, the ground must be worked down fine and firm. If it is not rich it should be made so by adding a liberal coat of manure, from ten to twenty loads to the acre. Well rotted barn-yard manure is best as fresh manure is liable to contain weed seed.

Spring is, by far, the better time to plant as the plants have a longer season to grow and are more vigorous and healthy. The plants should be set in rows three feet apart and twelve to fifteen inches in the row. Irrigate immediately, as it will settle the ground and water the plants at the same time.

Good varieties are: Senator Dunlap, Aroma, Warfield, Jucunda, Gandy.

ASPARAGUS is the first vegetable to be had in the spring and it deserves to be more generally grown for home use, and also as a market crop. If located near a good market, asparagus growing is a safe proposition for from four to six hundred dollars per acre per year, and the cost of growing is not greater than that of potatoes.

A bed of asparagus that is properly planted and cared for will last and bear regular crops for twenty years, and during that

time will show a profit that will compare favorably with your orchard or any other crop. Any good soil will do, sandy soils being preferable because they are earlier and easier to work.

In planting, plow the ground thoroughly and work down to an even surface. Make the rows three and one-half feet apart and set the plants twelve inches in the row. This will require ten thousand plants per acre. They should be planted in ditches, crown up, about four inches below the surface. Cover lightly until the plants are firmly started when the ground may be made level. See that each plant is watered but do not allow the water to stand in the ditches, and after they are irrigated, see that all the plants are covered.

ROSES: The first thing to do in planting roses is to spade up the ground. Dig it up thoroughly, fifteen inches deep and eighteen inches farther out than the plants are to be set, working it up fine and mellow to the bottom. Then dig the holes large enough to hold the roots without cramping and deep enough to allow the plants to set about two inches deeper than they were in the nursery. Fill around the roots with the best soil, pour in water to settle it, then fill it until the ground around the plants is a little above the level. Then cut the tops off level with the top of the ground. This applies to all kinds of roses, and if you follow it, your roses will live.

EVERGREENS: If you get evergreens that have been dug and shipped with a ball of earth attached, plant so they will be an inch deeper than they were in the nursery and give plenty of water. If you don't get that kind, you will save time and trouble by not planting at all.

PEONIES will thrive in any good garden soil. They are perfectly hardy and need no extra care if they are carefully planted. They

should be planted about two inches below the surface.

DAHLIAS should be planted in mellow soil as soon as danger of frost is past. In the fall the roots must be taken up and packed in sand, and put away in a dark cellar, secure from frost.

CLIMBING VINES: There are a few of these that are hardy in this country and they deserve a place anywhere. They should be planted in well spaded ground, given plenty of water and the tops cut back to about two inches from the ground, to give the roots a chance to start.

Liquid manure poured around the roots two or three times a year will be a benefit. I would recommend the Virginia Creeper, Wisteria, the Honeysuckles and Clematis. The last two will need winter protection if planted in exposed places.

Deciduous Shrubs and Hedges

Honeysuckle Hydrangea, Lilacs, Syringa, Barberry and Privet. All of these, in their varied colors, are hardy here if properly cared for the first year. Where this kind of stock is used for a hedge, the method of planting which will give best results is as follows. Spade up the ground where the hedge is to be, to a depth of not less than twelve inches, and about two feet wide, working it down fine. Then dig a ditch deep enough to hold the plants two inches deeper than they were in the nursery. Set the plants one foot apart and fill the ditch about half full with the best top soil. Then irrigate, after which the ditch may be filled to a little above the level. The best hedge is made by cutting the tops back to the ground, but if you have not the heart to do that, prune them severely, cutting the side limbs back to a single bud and the tops back to an even length. If they make a strong growth the first year, do not water them after August the fifteenth, until the

wood is thoroughly ripe and the leaves begin to fall.

Privet may need some winter protection the first year, which can be given by laying down and covering with earth, or by banking up with straw. After the first year, if the hedge is kept sheared, it will take care of itself, and a finer hedge can not be had.

Shade Trees

The best method of planting shade trees does not differ greatly from that of fruit trees. They should have all the care in handling and transplanting that can possibly be given them, and the larger the tree, the more care it should have.

No country, or home, need be without its shade trees. Any home owner, anywhere, can have some, if he thinks enough of them to give them the same care he gives his crops.

There are all kinds and sizes of shade and ornamental trees offered for sale and in selecting, one must be governed by what he expects the tree to do. If you want only a few, and can give them good care, the larger sizes, trees two to three inches caliper, can be used successfully, but in larger plants where the care is to be indifferent, the smaller trees, from 4 to 6 feet and 6 to 8 feet high, will give best results.

Shade trees are generally planted in solid ground, that is, in ground that has not been prepared as for an orchard and in planting it is well to bear that fact in mind. The holes should be dug twice as wide and several inches deeper than is necessary to hold the tree and the tree planted three or four inches deeper than it stood in the nursery. The side limbs should be cut back to about six inches and the top one-half of the new growth. On large trees it will be a benefit to wrap the trunk with burlap or some like material and wet it two or three times a day. This will prevent drying out. They should

also be firmly staked to hold them in place. Always give the trees plenty of water the first summer.

I would recommend, for ornamental trees, Cut Leaf Weeping Birch, Horse Chestnut, Norway Maple, Oak Leaf Mountain Ash, Bechtel's Double Flowering Crab, Wier's Cut Leaf Maple.

Semi-hardwood trees: Soft Maple, American Elm, Hackberry, Box Elder, Black Locust, Catalpa.

For windbreaks or quick shade: Carolina Poplar, Cottonless Cottonwood. This last is the greatest drouth register known and is heartily recommended where that quality is an advantage.

